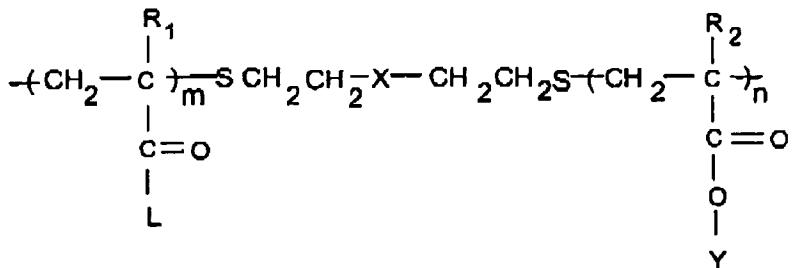


This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Original) Block copolymers having formula 1:



wherein,

R_1 is H, CH_3 , C_2H_5 , C_6H_5 ,

R_2 is H, CH_3 , C_2H_5 , C_6H_5 ,

X is an ester or amide link,

m is in the range of 3 to 500,

n is in the range of 2 to 50,

L is OH, NH_2 , OCH_3 , $\text{NHCH}(\text{CH}_3)_2$,

Y is N-Acetyl Glucosamine, mannose, galactose, sialic acid, fructose, ribulose, erythro-ose, xylulose, psicose, sorbose, tagatose, glucopyranose, fructofuranose, deoxyribose, galactosamine, sucrose, lactose, isomaltose, maltose, cellobiose, cellulose and amylose.

2. (Original) Block copolymers as claimed in claim 1, wherein molecular weight of block copolymers is in the range of 1000 Daltons to 200000 Daltons.

3. (Original) Block copolymers as claimed in claim 1, wherein the block copolymers having ligand are useful for applications in medical and biotechnology.

4. (Original) Block copolymers as claimed in claim 1, wherein the block copolymers are more stable for interactions with bio-molecules than the natural polymers such as chitin and chitosan having natural N-Acetyl glucosamine.

5. (Original) Block copolymers as claimed in claim 1, wherein the block copolymers having ligands enhances binding effect by binding simultaneously on the multiple sites of the enzyme / disease causing viruses.

6. (Original) Block copolymers as claimed in claim 1, wherein the block copolymers provide greater accessibility to the ligand conjugate for binding with receptor bio-molecules.

7. (Original) Block copolymers as claimed in claim 1, wherein the block copolymers are effective at very low concentrations.

8. (Original) Block copolymers as claimed in claim 1, wherein block copolymers having ligands and NAG are stable, water soluble, resistant to degradation and free from the microbial contamination thus having advantage over natural polymers like chitin and chitosan.

9. (Original) Block copolymers as claimed in claim 1, wherein different monomers are incorporated in the block copolymer chain to make it hydrophobic or hydrophilic.

10. (Original) Block copolymer as claimed in claim 1, wherein relative inhibition of lysozyme in terms of I_{50} for monomer NAG is 74.00mM and has decreased to 0.00026, which is almost 290000 times lower than that for NAG.

11. (Original) Block copolymer as claimed in claim 1, wherein the block copolymer having weight 14000 – 638 has binding constant 1.38×10^6 which shows 38000 folds enhancement over NAG (5.24×10^2).

12-23. (Canceled)